FLORENCE COPPER

FLORENCE COPPER INC.
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December 17, 2019

ADEQ Water Quality Compliance Section
Mail Code 5415B-1
1110 West Washington Street
Phoenix, Arizona 85007

Attention: Mr. Tracy Bunch

Subject: Weekly Monitoring Report for Week Ending 12/07/2019
Florence Copper, Production Test Facility
Aquifer Protection Permit No. 106360, LTF 61845

Dear Mr. Bunch:

Florence Copper is submitting this report in accordance with Table 4.1-8 and Section 2.7.4.4 of the Production Test Facility Temporary Aquifer Protection Permit (APP) No. 106360.

In accordance with Table 4.1-8 of the APP, this report includes In-Situ Best Available Demonstrated Control Technology (BADCT) compliance monitoring for the PTF that is required to be reported on a weekly basis including:

- Recovered volume to injection volume;
- Inward hydraulic gradient; and
- Maximum injection pressure.

A map showing the location of the PTF injection, recovery, and observation wells is included as Figure 1.

Recovered Volume to Injection Volume

A summary of the injected and recovered volumes for the week of 12/01/2019 to 12/07/2019 is included in Table 1. The total injected and recovered volumes for the PTF as a daily total are also presented on Figure 2.

During the reporting period no exceedance of the alert level was measured for recovered volume to injected volume. The alert level is the recovered volume shall exceed the injected volume.

Inward Hydraulic Gradient

Table 2 includes a summary of water levels in the recovery and observation well pairs. Hydrographs showing the water level elevation for each recovery well and observation well pair are included in Figure 3. Work continues to retrieve downhole equipment and redevelop O-03. Gradients were unavailable for the R-03 to O-03 and R-04 to O-03 well pairs from 12/1/2019 – 12/5/2019. Measured gradients on 12/5 and 12/6 in the O-03 well pairs were greater than 60-feet.

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During the reporting period, there was no exceedance of the alert level for the inward hydraulic gradient in the remaining well pairs, and R-03 maintained a substantial gradient with its other paired observation well. The alert level for the inward hydraulic gradient is that the water level elevation in the paired observation well must be a minimum of 1 foot higher than the paired recovery well.

Injection Pressure

A summary of the injection pressures during the reporting period is included as Table 3. Injection flows to the wellfield were adjusted beginning on 12/04/2019 to accommodate mechanical integrity testing (MIT), video, and temperature logging. These activities are expected to last through 12/20/2019. Pressure fluctuations are expected and will be closely monitored.

During the reporting period no alert levels were exceeded for injection pressure, the injection pressure limit for the injection wells is limited by the fracture gradient of 0.65 pounds per square inch (psi) per foot. For the PTF injection wells this pressure limit equates to 104 psi.

Please contact me at 520-374-3984 if you require any additional information.

Sincerely,
Florence Copper Inc.

Richard Tremblay
Vice President Operations

Attachments:
Tables and Figures

cc: Marybeth Greenslade, ADEQ
Nancy Rumrill, United States Environmental Protection Agency

TABLES

Table 1. Injected and recovered volumes (gallons) for the week 12/01/2019 – 12/07/2019

Date	Daily Injection Flow	Daily Recovery Flow	Ratio PLS/Raff	% Recovery
12/1/2019	346100	387700	1.12	112
12/2/2019	345500	388300	1.12	112
12/3/2019	345800	387200	1.12	112
12/4/2019	331700	367200	1.11	111
12/5/2019	324900	359100	1.11	111
12/6/2019	309500	341800	1.10	110
12/7/2019	297100	330200	1.11	111
Weekly Average	**328657**	**365929**	**1.11**	**111**

Table 2. Average daily water levels in the recovery and observation well pairs (amsl)

Well Pairs Avg Elev	12/1/19	12/2/19	12/3/19	12/4/19	12/5/19	12/6/19	12/7/19
R-01	1240.76	1241.17	1241.47	1239.81	1239.43	1241.33	1242.46
O-01	1249.28	1249.80	1250.20	1246.39	1245.60	1246.01	1245.91
O-07	1247.91	1248.36	1248.68	1247.66	1247.57	1248.28	1248.35
R-02	1219.91	1220.38	1220.52	1216.50	1215.69	1215.54	1214.86
O-01	1249.28	1249.80	1250.20	1246.39	1245.60	1246.01	1245.91
O-02	1247.86	1248.34	1248.73	1245.95	1245.39	1245.55	1245.28
R-03	1180.59	1176.43	1177.09	1193.40	1198.78	1189.64	1182.85
O-02	1247.86	1248.34	1248.73	1245.95	1245.39	1245.55	1245.28
O-03 *						1246.33	1246.20
R-04	1169.08	1156.82	1153.59	1153.07	1151.96	1168.73	1144.38
O-03 *						1246.33	1246.20
R-05	1178.64	1176.45	1175.85	1178.17	1177.64	1176.87	1175.77
O-04	1246.15	1246.41	1246.64	1248.59	1248.99	1249.64	1249.84
R-06	1161.03	1160.01	1159.93	1187.08	1197.13	1203.76	1211.96
O-04	1246.15	1246.41	1246.64	1248.59	1248.99	1249.64	1249.84
O-05	1245.60	1246.16	1246.45	1247.86	1248.20	1249.22	1249.60
R-07	1242.98	1243.43	1243.75	1244.48	1244.72	1246.54	1247.26
O-05	1245.60	1246.16	1246.45	1247.86	1248.20	1249.22	1249.60
O-06	1246.55	1247.08	1247.38	1247.66	1247.78	1248.71	1248.96
R-08	1234.46	1235.30	1235.73	1235.40	1235.45	1236.30	1236.59
O-06	1246.55	1247.08	1247.38	1247.66	1247.78	1248.71	1248.96
O-07	1247.91	1248.36	1248.68	1247.66	1247.57	1248.28	1248.35

*O-03 was offline for pump/tubing removal and redevelopment. No water elevations or samples could be collected 12/1-12/5.

Table 3. Injection well pressures (psi)

Date	I-01			I-02			I-03			I-04		
	AVG	MIN	MAX	AVG	MIN	MAX	AVG	MIN	MAX	AVG	MIN	MAX
12/1/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/2/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/3/2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/4/2019	0.00	0.00	0.00	66.05	0.00	89.88	0.25	0.00	37.84	0.26	0.00	34.92
12/5/2019	0.00	0.00	0.00	83.84	0.08	88.55	0.00	0.00	0.00	0.00	0.00	0.01
12/6/2019	0.00	0.00	0.00	74.09	62.09	88.67	0.00	0.00	0.00	0.00	0.00	0.00
12/7/2019	0.00	0.00	0.00	68.54	65.89	70.44	0.00	0.00	0.00	0.00	0.00	0.00

Injection flows to the wellfield were adjusted beginning on 12/04/2019 to accommodate mechanical integrity testing (MIT). Pressure fluctuations are expected and will be closely monitored.

FIGURES

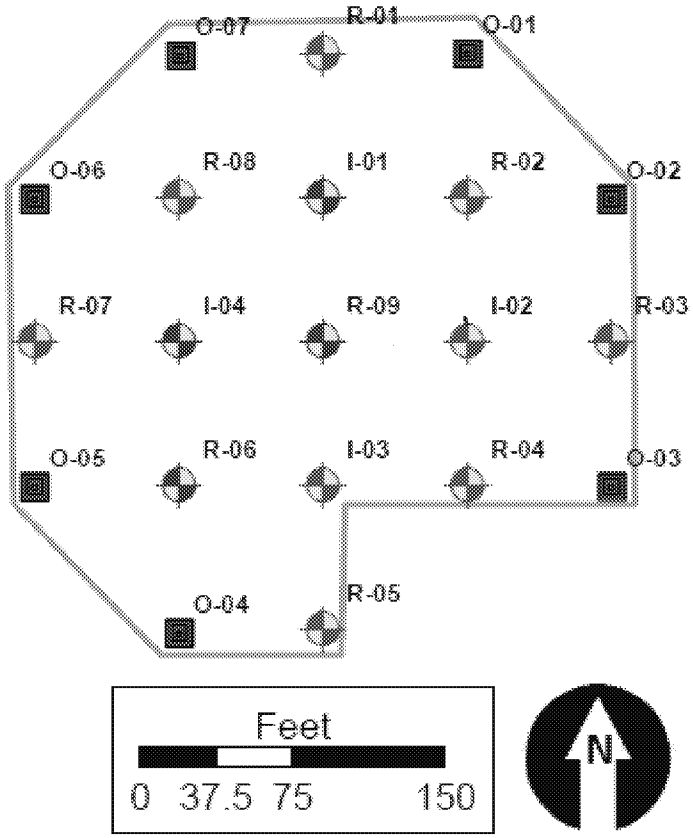

Figure 1. PTF injection, recovery, and observation well locations

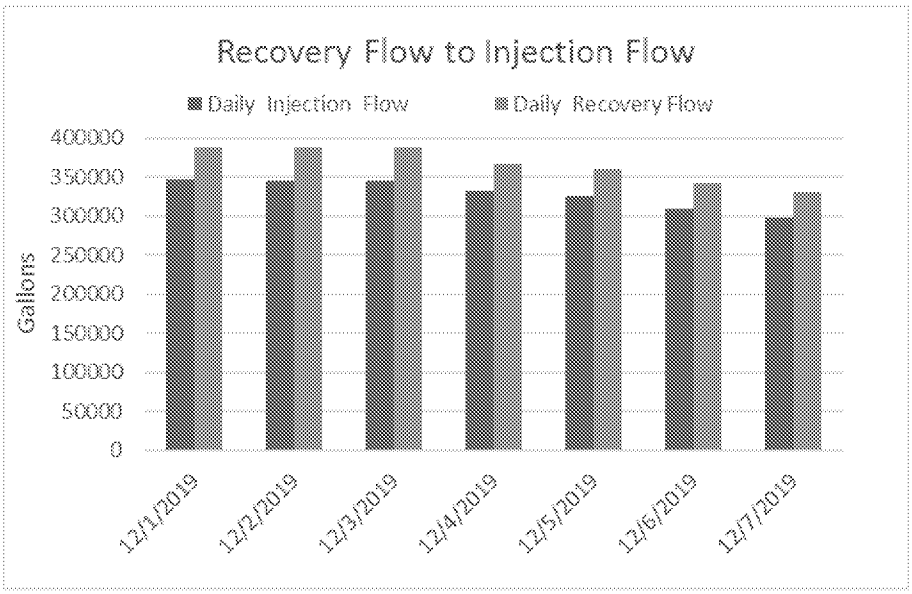

Figure 2. Recovered volume to injected volume

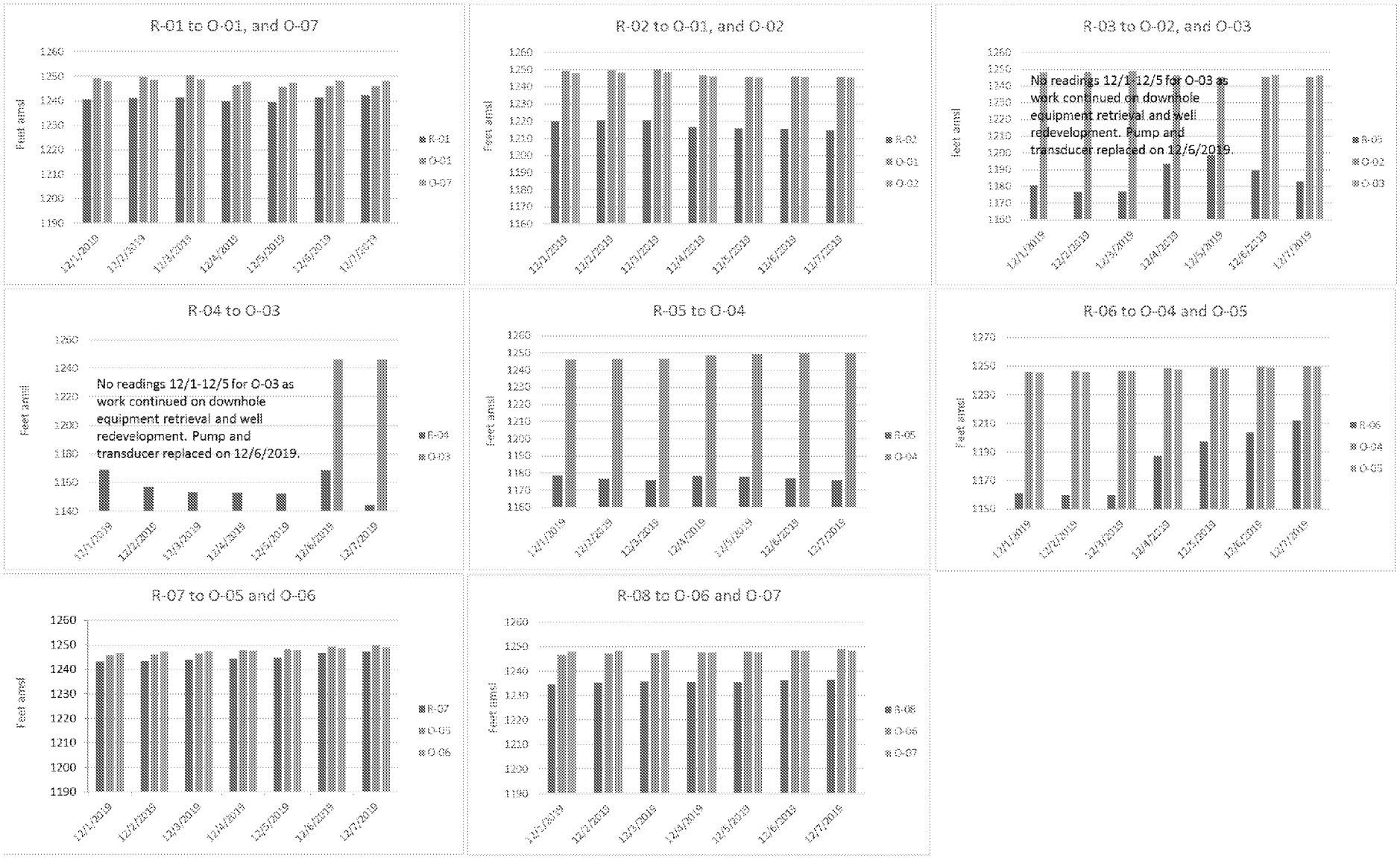

Figure 3. Recovery and observation well pairs